	Application No.	Applicant(s)
Notice of Allowability	09/648,271	ESTAKHRI ET AL.
	Examiner	Art Unit	
	Denise Tran	2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment after final filed 7/31/06 and the telecommunication on 8/17/06*.

2. ☒ The allowed claim(s) is/are *1-13,15-18,21-24,27-49 and 55-59*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 7/31/06

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *8/17/06* .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

        Authorization for this examiner's amendment was given in a telephone interview

with Mr. Haverstock on 8/17/06.

2.   The information disclosure statement filed 7/31/06 fails to comply with 37 CFR

1.98(a)(2), which requires a legible copy of each cited foreign patent document; each

non-patent literature publication or that portion which caused it to be listed; and all other

information or that portion which caused it to be listed. It has been placed in the

application file, but the information referred to therein has not been considered.

3.   The application has been amended as follows: see the following Claim

Amendments, pages 2-16.

CLAIM AMENDMENTS

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims regarding the present application. In reading this, text added by the amendment is underlined, and canceled text appears in ~~strikethrough~~.

1. 1. (Original) A method of storing digital data within a Flash Memory System comprising the steps:
   a. mapping a non-volatile memory medium within the Flash Memory System into a plurality of independently addressable, independently programmable and independently erasable memory blocks including a plurality of Dedicated Data Blocks and a plurality of Dedicated Overhead Blocks comprising a first Dedicated Overhead Block and a second Dedicated Overhead Block;
   b. mapping each of the plurality of Dedicated Overhead Blocks into a plurality of pages, wherein the plurality of pages within each Dedicated Overhead Block are addressed according to an identical set of consecutive page addresses;
   c. mapping each of the plurality of Overhead Pages into a plurality of Overhead Segments, wherein the plurality of Overhead Segments within each page are addressed according to an identical set of consecutive segment addresses, each Overhead Segment comprising a plurality of registers including a Physical Address Register and a flag field; and
   d. correlating the plurality of consecutive Overhead Page addresses within the first Dedicated Overhead Block to a respective plurality of consecutive Virtual Logical Block Addresses including a first Logical Block Address defining a first Logical Block of User Data correlated to a first Overhead Page address defining a first Overhead Page.

2. 2. (Currently amended) The method according to Claim 1 further comprising the steps:
   a. receiving from a host a first set of User Data defined according to the first Virtual Logical Block Address;
   b. storing the first set of User Data in a first Dedicated Data Block defined according to a first Virtual Physical Block Address;

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6   c.   identifying a first available segment within the first page, an available Overhead
7   Segment comprising an Overhead Segment that is unused, non-defective, and not
8   obsolete, and wherein the first available segment is defined by a lowest segment
9   address of available segments comprising the first page; and
10   d.   storing an address of the first Dedicated Data Block in the Physical Address
11   Register of the first available Overhead Segment.

1   3.   (Original) The method according to claim 1 wherein each of the Overhead Segments
2   further comprises an error correction code.

1   4.   (Original) The method according to Claim 1 further comprising the step of consolidating
2   all current Overhead Segments within the first Dedicated Overhead Block into a second
3   Dedicated Overhead Block, a current Overhead Segment comprising an Overhead
4   Segment that is used, non-defective, and not obsolete.

1   5.   (Previously Presented) The method according to Claim 4 wherein the step of
2   consolidating the first Dedicated Overhead Block into a second Dedicated Overhead
3   Block further comprises the steps:
4   a.   moving data stored within a current Overhead Segment within the first Overhead
5   Page of the first Dedicated Overhead Block to a replacement Overhead Segment
6   within a second Overhead Page within the second Dedicated Overhead Block, the
7   replacement Overhead Segment being a lowest addressable segment within the
8   second Overhead Page, the second Overhead Page being defined by an identical
9   page address as an address defining the first Overhead Page; and
10   b.   erasing the first Dedicated Overhead Block.

1   6.   (Original) The method according to Claim 1 wherein the step of correlating the plurality
2   of consecutive page addresses to a respective plurality of consecutive Virtual Logical
3   Block Addresses is performed through a RAM space manager.

1   7.   (Original) The method according to claim 6 further comprising the steps:
2   a.   storing a logical address within a non-volatile correlation register within the Flash
3   Memory System; and

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4   b.   loading a physical address into a correlation register of the RAM space manager
5   upon power up.

1   8.   (Original) The method according to Claim 2 wherein the flag field within each Overhead
2   Segment further includes a used flag, an obsolete flag, and a defective flag.

1   9.   (Original) The method according to Claim 8 wherein the step of identifying the first
2   available segment further comprises the step of examining select flags within select
3   Overhead Segments within the first page.

1   10.   (Original) The method according to Claim 9 wherein the step of storing an address of the
2   first Dedicated Data Block in the Physical Address Register of the first available
3   Overhead Segment further comprises the step of setting the used flag within the first
4   available Overhead Segment to a second position, thereby indicating that overhead data
5   has been stored therein.

1   11.   (Original) The method according to Claim 10 further wherein the step of storing an
2   address of the first Dedicated Data Block in the Physical Address Register of the first
3   available Overhead Segment further comprises the step of setting the obsolete flag in a
4   last used Overhead Segment to a second position, thereby indicating the last used
5   segment is obsolete; wherein the address of the first available segment consecutively
6   follows an address defining the last used Overhead Segment within the first page.

1   12.   (Original) The method according to claim 3 wherein the step of consolidation is preceded
2   by a step of writing overhead data into a highest addressable overhead segment of a page
3   within the first dedicated overhead block.

1   13.   (Original) The method according to claim 1 further comprising the steps:
2   a.   marking as defective a dedicated overhead block; and
3   b.   re-designating a dedicated data block as a dedicated overhead block.

1   14.   (Canceled)

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1   15.   (Currently amended) ~~The method according to Claim 14 further~~ A method of data storage
2   within a Flash Memory comprising the steps:
3   a.   mapping a non-volatile memory medium within the Flash Memory System into a
4   plurality of independently addressable, independently programmable and
5   independently erasable memory blocks including a plurality of Dedicated Data
6   Blocks and a plurality of Dedicated Overhead Blocks comprising a first Dedicated
7   Overhead Block and a second Dedicated Overhead Block;
8   b.   mapping each of the plurality of Dedicated Overhead Blocks into a plurality of
9   consecutively addressed Overhead Segments, wherein the plurality of segments
10   within each Dedicated Overhead Block are addressed according to an identical set
11   of distinct segment addresses, each segment comprising a Physical Address
12   Register and a Flag Field;
13   c.   correlating the first Dedicated Overhead Block to a first group of Virtual Logical
14   Block Addresses including a first Virtual Logical Block Address;
15   [[a]]d. receiving from a host a first set of User Data defined according to a first Virtual
16   Logical Block Address;
17   [[b]]e. identifying a first available Overhead Segment within the first Dedicated
18   Overhead Block, the first available Overhead Segment comprising a lowest
19   addressable available Overhead Segment within the first Dedicated Overhead
20   Block, an available Overhead Segment comprising an Overhead Segment that is
21   unused, non-defective, and not obsolete;
22   [[c]]f. storing the first set of User Data in a first Dedicated Data Block defined according
23   to a first Virtual Physical Block Address; and
24   [[d]]g. storing an address of the first Dedicated Data Block in the Physical Address
25   Register of the first available Overhead Segment[[.]].
           wherein user data and overhead data are segregated in separate memory blocks, such that the user
           data are stored only in the plurality of dedicated data blocks and the overhead data are separately
           stored only in the plurality of dedicated overhead blocks.

1   16.   (Original) The method according to Claim 15 further comprising the step of consolidating
2   all current Overhead Segments within the first Dedicated Overhead Block into
3   consecutive Overhead Segments within the second Dedicated Overhead Block, a current

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4   Overhead Segment comprising an Overhead Segment that is used, non-defective, and not
5   obsolete.

1   17.   (Original) The method according to Claim 16 wherein the step of consolidating the first
2   Dedicated Overhead Block into a second Dedicated Overhead Block comprises the steps:
3   a.   moving data stored within a first current Overhead Segment in the first Dedicated
4   Overhead Block into a lowest addressable available Overhead Segment within the
5   second Dedicated Overhead Block, and
6   b.   erasing the first Dedicated Overhead Block.

1   18.   (Original) The method according to claim 17 wherein the step of consolidation is
2   preceded by a step of writing overhead data into a last addressable segment of the first
3   dedicated overhead block.

1   19.   (Canceled)

1   20.   (Canceled)

1   21.   (Original) The method according to Claim 15 wherein the flag field within each
2   Overhead Segment further includes a used flag, an obsolete flag, and a defective flag.

1   22.   (Original) The method according to Claim 15 wherein the step of identifying the first
2   available Overhead Segment further comprises the step of examining select flags within
3   select Overhead Segments within the first Dedicated Overhead Block.

1   23.   (Original) The method according to Claim 21 further comprising the step of setting the
2   used flag within the next available Overhead Segment to a second position, thereby
3   indicating that overhead data has been stored in the next available segment.

1   24.   (Original) The method according to Claim 17 wherein the step of moving data stored in a
2   first current overhead segment into a first available overhead segment further comprises
3   the steps:

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4   a.   examining select flags within select Overhead Segments comprising the first
5   Dedicated Overhead Block, and
6   b.   examining select flags within select Overhead Segments comprising the second
7   Dedicated Overhead Block.

1   25.   (Canceled)

1   26.   (Canceled)

1   27.   (Previously Presented) A method of storing digital data within a Flash Memory System
2   comprising the steps:
3   a.   mapping a non-volatile memory medium within the Flash Memory System into a
4   plurality of separately addressable, separately programmable and separately
5   erasable memory blocks comprising a plurality of Dedicated Data Blocks and a
6   plurality of Dedicated Overhead Blocks, the plurality of Dedicated Overhead
7   Blocks including a first Dedicated Overhead Block and a second Dedicated
.8   Overhead Block;
9   b.   mapping each of the plurality of Dedicated Overhead Blocks into a fixed overhead
10   field and a random overhead field, wherein the fixed overhead field of each of the
11   plurality of Dedicated Overhead Blocks comprises a plurality of consecutively
12   addressable Overhead Segments defined according to an identical sequence of
13   Overhead Segment addresses, and a random overhead field comprises a plurality of
14   consecutively addressable Overhead Segments, each Overhead Segment
15   comprising a plurality of registers including a Physical Address Register; and
16   c.   correlating the plurality of consecutively addressable Overhead Segment within the
17   fixed overhead field of the first Dedicated Overhead Block to a first group of
18   consecutively addressable Virtual Logical Block Addresses including a first fixed
19   segment correlated to a first Virtual Logical Block Address.

1   28.   (Original) The method according to Claim 27 further comprising the steps:
2   a.   marking as defective a dedicated Overhead Block; and
3   b.   re-designating a Dedicated Data Block as a Dedicated Overhead Block.

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1 29. (Previously Presented) The method according to Claim 27 wherein the step of correlating
2   the plurality of consecutively addressable Overhead Segments within the fixed overhead
3   field of the Dedicated Overhead Block to a first group of consecutively addressable
4   Virtual Logical Block Addresses is performed through a RAM Space Manager.

1 30. (Original) The method according to Claim 29 further comprising the steps:
2   a.   storing a logical address within a non-volatile correlation register within the Flash
3   Memory System; and
4   b.   loading a physical address into a correlation register of the RAM Space Manager
5   upon power up, thereby correlating a logical address with a physical address in the
6   RAM Space Manager.

1 31. (Previously Presented) The method according to Claim 27 further comprising the steps:
2   a.   receiving from a host a first set of User Data defined according to the first Virtual
3   Logical Block Address;
4   b.   storing the first set of User Data in a first Dedicated Data Block defined according
5   to a first Virtual Physical Block Address; and
6   c.   storing overhead data corresponding to the first Virtual Logical Block Address in
7   the first Overhead Segment within the first Dedicated Overhead Block.

1 32. (Original) The method according to Claim 31 wherein the step of storing overhead data in
2   the first Overhead Segment comprises the steps:
3   a.   identifying the first fixed segment within the fixed overhead field of the first
4   Dedicated Overhead Block;
5   b.   determining if the first fixed segment is available;
6   c.   storing the overhead data supporting the first Virtual Logical Block Address in the
7   first fixed segment when the first fixed segment is available; and
8   d.   storing the overhead data corresponding to the first Virtual Logical Block Address
9   in a first random Overhead Segment when the first fixed segment is not available,
10   the first random segment comprising a lowest addressable unused and non-
11   defective Overhead Segment within the random overhead field of the first
12   Dedicated Overhead Block.

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1   33.   (Original) The method according to Claim 31 wherein the step of determining that the first
2   fixed segment is available comprises the step of examining flags within the first fixed
3   segment.

1   34.   (Original) The method according to claim 31 further comprising the steps:
2   a.   mapping the random overhead field of each Dedicated Overhead Block into a
3   plurality of pages, each page comprising a plurality of segments;
4   b.   designating a lowest addressable segment in each page within the random overhead
5   field as a Status Segment; and
6   c.   mapping each status segment into a plurality of registers to function as an update
7   map.

1   35.   (Original) The method according to Claim 31 wherein the step of storing overhead data
2   corresponding to the first Virtual Logical Block Address in the first random Overhead
3   Segment further comprises the steps:
4   a.   locating a last previous segment used for storing overhead data supporting the first
5   Virtual Logical Block Address;
6   b.   setting an obsolete-flag corresponding to the last previous segment to a second
7   value, indicating that overhead data within the last previous segment is now
8   obsolete; and
9   c.   setting an used-flag in the first random Overhead Segment to a second value,
10   indicating that overhead data is now stored in the first random Overhead Segment.

1   36.   (Original) The method according to Claim 34 wherein the update map contains one
2   register corresponding to each segment within the fixed overhead field of the first
3   Dedicated Overhead Block.

1   37.   (Original) The method according to Claim 27 further comprising the step of consolidating
2   current overhead segments within the first Dedicated Overhead Block into the second
3   Dedicated Overhead Block when the first Dedicated Overhead Block becomes full.

1   38.   (Previously Presented) The method according to claim 37 wherein the step of
2   consolidating current overhead segments comprises the steps:

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3   a.   correlating a second Overhead Segment within the fixed overhead field of the
4   second Dedicated Overhead Block to the first Virtual Logical Block Address; and
5   b.   copying data within the first overhead segment into the second overhead segment.

1   39.   (Original) A method of storing digital data within a Flash Memory System comprising the
2   steps:
3   a.   mapping a non-volatile memory medium within the Flash Memory System into a
4   plurality of separately addressable, separately programmable and separately
5   erasable memory blocks comprising a plurality of Dedicated Data Blocks and a
6   plurality of Dedicated Overhead Blocks, the plurality of Dedicated Overhead
7   Blocks including a first Dedicated Overhead Block and a second Dedicated
8   Overhead Block;
9   b.   mapping each of the plurality of Dedicated Overhead Blocks into plurality of
10   Super Overhead Fields, including a first Super Overhead Field within the first
11   Dedicated Overhead Block;
12   c.   mapping each of the plurality of Super Overhead Fields into an identical set of
13   consecutively addressable Overhead Segments, each of the plurality of Overhead
14   Segments comprising a plurality of registers including a Physical Address
15   Register;
16   d.   correlating a first Super Virtual Logical Block Address defined by consecutive
17   Virtual Logical Block Addresses to the first Dedicated Overhead Block; and
18   e.   correlating a first Virtual Logical Block Address within the first Super Virtual
19   Logical Block Address to a first Overhead Segment Address within the first
20   Dedicated Overhead Block.

1   40.   (Original) The method according to Claim 39 further comprising the steps:
2   a.   marking as defective a dedicated Overhead Block; and
3   b.   re-designating a Dedicated Data Block as a Dedicated Overhead Block.

1   41.   (Original) The method according to Claim 39 wherein the step of correlating a first Super
2   Virtual Logical Block Address to the first Dedicated Overhead Block is performed
3   through a RAM Space Manager.

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1   42.   (Original) The method according to Claim 41 further comprising the steps:
2   a.   storing a logical address within a non-volatile correlation register within the Flash
3   Memory System; and
4   b.   loading a physical address into a correlation register of the RAM Space Manager
5   upon power up, thereby correlating a logical address with a physical address in the
6   RAM Space Manager.

1   43.   (Original) The method according to Claim 42 wherein the non-volatile correlation register
2   is within an extension field of a Super Overhead Field of a Dedicated Overhead Block.

1   44.   (Previously Presented) The method according to Claim 39 further comprising the steps:
2   a.   receiving from a host a first set of User Data defined according to the first Virtual
3   Logical Block Address;
4   b.   storing the first set of User Data in a first Dedicated Data Block defined according
5   to a first Virtual Physical Block Address;
6   c.   storing overhead data corresponding to the first Virtual Logical Block Address in a
7   first Overhead Segment defined by the first Overhead Segment Address within the
8   first Super Overhead Field.

1   45.   (Original) The method according to Claim 44 wherein the step of storing overhead data is
2   preceded by the step of incrementing from a previous Super Overhead Field within the
3   first Dedicated Overhead Block to the first Super Overhead Field.

1   46.   (Original) The method according to Claim 44 wherein the step of storing overhead data
2   further comprises the step of setting an used-flag within the first Overhead Segment to a
3   second position indicating that overhead data is stored within the first Overhead Segment.

1   47.   (Original) The method according to Claim 46 wherein the step of storing overhead data
2   further comprises the steps:
3   a.   locating a last previous segment within the first Dedicated Overhead Block used
4   for storing overhead data supporting the first Virtual Logical Block Address; and
5   b.   setting an obsolete-flag within the last previous segment to a second value,
6   indicating that overhead data within the last previous segment is now obsolete.

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1   48.   (Original) The method according to Claim 39 further comprising the step of consolidating
2   current overhead segments within the first Dedicated Overhead Block into the second
3   Dedicated Overhead Block when overhead data has been stored in a final Super Overhead
4   Field within the first Dedicated Overhead Block.

1   49.   (Original) The method according to claim 48 wherein the step of consolidating current
2   overhead segments comprises the steps:
3   a.   identifying a first current Overhead Segment defined according to the first
4   Overhead Segment Address within the first Dedicated Overhead Block ; and
5   b.   copying data within the first current Overhead Segment into a second overhead
6   segment defined according to the first Overhead Segment Address within the first
7   Super Overhead Field of the second Dedicated Overhead Block.

1   50.   (Canceled)

1   51.   (Canceled)

1   52.   (Canceled)

1   53.   (Canceled)

1   54.   (Canceled)

1   55.   (Currently Amended) ~~The Flash memory Device according to Claim 54~~ A flash memory
2   device for storing <u>User Data comprising a plurality of separate, independently addressable,</u>
3   <u>independently programmable and independently erasable non-volatile Physical Memory</u>
4   <u>Blocks distinguishably defined by a plurality of Physical Block Addresses including:</u>
5   <u>a.   a plurality of dedicated data Blocks for storing User Data only; and</u>
6   <u>b.   a plurality of consecutively addressed Dedicated Overhead Blocks for storing</u>
7   <u>Overhead Data only including a first Dedicated Overhead Block and a second</u>
8   <u>Dedicated Overhead Block.</u>

9   wherein the plurality of dedicated data blocks is segregated from the plurality of dedicated

10   overhead blocks, wherein each Dedicated Overhead Block is identically comprised of a

11   plurality of separately addressable Overhead Pages, each block following an identical

12   sequence of page addresses, wherein each Overhead Page is comprised of a plurality of

13   independently addressable and independently programmable segments, including a

14   plurality of Overhead Segments, wherein the plurality of independent Overhead Segments

15   are used for storing Overhead Data, each Overhead Segment supporting one Virtual

16   Logical Block of User Data, each Overhead Segment comprising:

17   a.   physical Address Register for storing a Physical Address for locating

18   corresponding User Data; and

19   b.   a flag field,

20   wherein a first group of Virtual Logical Block Addresses including a first VLBA are

21   assigned to the first Dedicated Overhead Block, such that overhead data generated in

22   support of the first VLBA will be stored in an Overhead Segment within the first

23   Dedicated Overhead Block, wherein sequential VLBA's within the first group of VLBA's

24   are respectively correlated to sequentially addressed Overhead Page Addresses within the

25   first Dedicated Overhead Block, including a first Virtual Logical Block Address correlated

26   to a first Overhead Page within the first Dedicated Overhead Block, such that Overhead

27   Data supporting the first Virtual Logical Block Address will be stored in an Overhead

28   Segment within the first Overhead Page.

1   56.   (Currently Amended) The A Flash Memory Device according to Claim 54 for storing User

2   Data comprising a plurality of separate, independently addressable, independently

3   programmable and independently erasable non-volatile Physical Memory Blocks

4   distinguishably defined by a plurality of Physical Block Addresses including:

5   a.   a plurality of dedicated data Blocks for storing User Data only; and

6   b.   a plurality of consecutively addressed Dedicated Overhead Blocks for storing

7   Overhead Data only including a first Dedicated Overhead Block and a second

8   Dedicated Overhead Block,

9   wherein the plurality of dedicated data blocks is segregated from the plurality of dedicated

10   overhead blocks, wherein each Dedicated Overhead Block is identically comprised of a

11   plurality of separately addressable Overhead Pages, each block following an identical

12   sequence of page addresses, wherein each Overhead Page is comprised of a plurality of

13   independently addressable and independently programmable segments, including a

14   plurality of Overhead Segments, wherein the plurality of independent Overhead Segments

15   are used for storing Overhead Data, each Overhead Segment supporting one Virtual

16   Logical Block of User Data, each Overhead Segment comprising:

17   a.   physical Address Register for storing a Physical Address for locating

18   corresponding User Data; and

19   b.   a flag field,

20   wherein a first group of Virtual Logical Block Addresses including a first VLBA are

21   assigned to the first Dedicated Overhead Block, such that overhead data generated in

22   support of the first VLBA will be stored in an Overhead Segment within the first

23   Dedicated Overhead Block, wherein each of the plurality of Dedicated Overhead Blocks

24   further comprise of a fixed Overhead Field and a Random Overhead Field, the fixed

25   Overhead Field being comprised of a plurality of consecutively addressed Overhead

26   Pages, and the Random Overhead Field being comprised of a plurality of consecutively

27   addressed Overhead Pages.

1   57.   (Original) The Flash Memory Device according to Claim 56 wherein consecutively

2   addressed segments comprising the consecutively addressable Overhead Pages within the

3   Fixed Overhead Field of the first Dedicated Overhead Block are respectively correlated to

4   sequentially addressed Virtual Logical Block Addresses.

1   58.   (Currently Amended) The flash memory device according to Claim 57 wherein the

2   plurality of consecutively addressed segments comprising the consecutively addressed

3   Overhead Pages within a first Overhead Page within the Random Overhead Field of the

4   First Dedicated Overhead Block comprise a Status Segment and a plurality of Overhead

5   Segments, the Status Segment defined according to a lowest segment address among the

6   plurality of segments within the first Overhead Page.

1   59.   (Original) The A Flash Memory Device according to Claim 54 for storing User Data

2   comprising a plurality of separate, independently addressable, independently

3   programmable and independently erasable non-volatile Physical Memory Blocks

4   distinguishably defined by a plurality of Physical Block Addresses including:

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5   a.   a plurality of dedicated data Blocks for storing User Data only; and

6   b.   a plurality of consecutively addressed Dedicated Overhead Blocks for storing

7   Overhead Data only including a first Dedicated Overhead Block and a second

8   Dedicated Overhead Block,

9   wherein the plurality of dedicated data blocks is segregated from the plurality of dedicated

10   overhead blocks, wherein each Dedicated Overhead Block is identically comprised of a

11   plurality of separately addressable Overhead Pages, each block following an identical

12   sequence of page addresses, wherein each Overhead Page is comprised of a plurality of

13   independently addressable and independently programmable segments, including a

14   plurality of Overhead Segments, wherein the plurality of independent Overhead Segments

15   are used for storing Overhead Data, each Overhead Segment supporting one Virtual

16   Logical Block of User Data, each Overhead Segment comprising:

17   a.   physical Address Register for storing a Physical Address for locating

18   corresponding User Data; and

19   b.   a flag field,

20   wherein a first group of Virtual Logical Block Addresses including a first VLBA are

21   assigned to the first Dedicated Overhead Block, such that overhead data generated in

22   support of the first VLBA will be stored in an Overhead Segment within the first

23   Dedicated Overhead Block, wherein each Dedicated Overhead Block is further comprised

24   of a plurality of Super Overhead Fields including a first Super Overhead Field, a Super

25   Overhead Field comprised of a whole number of pages, each Super Overhead Field within

26   the first Dedicated Overhead Block comprised of an identical number of pages, wherein

27   consecutive Overhead Segments within first Super Overhead Region are respectively

28   assigned to consecutively addressed Virtual Logical Block Addresses which comprise a

29   first SuperBlock.

1   60.   (Canceled)

1   61.   (Canceled)

1   62.   (Canceled)

1   63.   (Canceled)

- 15 -

1   64.   (Canceled)

1   65.   (Canceled)

1   66.   (Canceled)

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4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Denise Tran whose telephone number is (571) 272-

4189. The examiner can normally be reached on Monday, Thursday, and an alternated

Friday from 8:45 a.m. to 5: 15p.m..

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Shah Sanjiv, can be reached on 571-272-4098. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Denise Tran

8/17/06